PATENT
Attorney Docket No. 700974-2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Reexamination of	)	
David FIKSTAD et al.	)	Group Art Unit: 1618
Application No.: 09/871,318	)	Examiner: Micah Paul Young
Filed: May 31, 2001	)	Confirmation No.: 1207
For: TRANSDERMAL DELIVERY OF LASOFOXIFENE	)	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Sir:

This Reply Brief is filed in response to the Examiner's Answer dated August 13, 2009 and is being filed under the provisions of 37 C.F.R. § 41.41.

REMARKS

Examiner's Answer

In the Examiner's Answer, the prior rejections of pending claims 14, 18, 19 and 25-27 were sustained. The Examiner rejected claims 14, 18, 19 and 25-27 under 35 U.S.C. § 103(a) as being unpatentable over the combined disclosures of U.S. Patent No. 5,662,925 ("the '925 patent") in view of U.S. Patent Nos. 6,203,817 ("the '817 patent") and 6,323,232 ("the '232 patent").

Claim Rejections Under 35 U.S.C. § 103

The Examiner asserted that the rejections under Section 103(a) were based on the "reasons set forth in the BPAI decision mailed 10/27/2008".[1] The Examiner's contentions, however, do not properly consider the complexities and difficulties of the claimed formulation as set forth in the declaration of Dr. Coop ("the Coop declaration") submitted under 37 C.F.R. § 1.132. The Examiner also responded improperly to the Coop declaration on procedural grounds by failing to perform a new analysis in view of this evidence demonstrating non-obviousness.

Non-Obviousness

The assertions that the '925, '817 and '232 patents disclose every limitation of the appealed claims are insufficient to demonstrate that the instant claims would be obvious to one of ordinary skill in the art. Instead, the Examiner's assertions are generalized arguments that do not allow for the intricacies inherently involved with formulating pharmaceuticals in a vehicle that enables their transmission across the skin barrier and into systemic circulation.

[1] The correct date of the decision in Appeal 2008-3445 is August 27, 2008.

As Dr. Coop testified in his declaration, the principal obstacle prohibiting the combination of the teachings of the '925, '817 and '232 patents is that they are directed to different formulations containing pharmaceuticals having very different chemical properties. The only common thread between these patents is their discussion of compounds having anti-estrogenic properties. Such a grouping of compounds by their pharmacological activity, however, does not even render the currently claimed invention "obvious to try."

A combination of elements found in the prior art would be "obvious to try" only where that combination results in one of "a finite number of identified predictable solutions." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398,421; 127 S.Ct. 1727, 1742 (2007). In the present case, the Examiner asserted that lasofoxifene belongs to the pharmacologic class of estradiols (*see* final Office Action dated Dec. 12, 2008 at p. 5). The class of estradiols, however, includes many thousands of compounds – hardly the "finite number of identified predictable solutions" required under *KSR*. The Examiner then modified his argument in the Examiner's Answer to be directed to the pharmacologic class of "anti-estrogenic compounds." Taking substitutions into account, this class is even larger than the estradiol compound class. Again, such a vast number of compounds does not constitute the required "finite group of potential solutions." Thus, no matter whether the pharmacologic class is directed to estradiols or anti-estrogenic compounds, the groups are neither finite nor predictable. Indeed, the unpredictability of anti-estrogenic compounds is multiplied due to the variability of the structures and their properties lending even more weight to the conclusion that the particular compound called for in the present claims – lasofoxifine – would not be obvious to try.

Applicants' Appeal Brief details the differences between the chemical properties of the pharmaceuticals in the '925, '817 and '232 patents. The Examiner's response, however, alleges

that despite the differences in chemical structure, the compounds disclosed in the cited patents are "functional" equivalents and that "the rejection of obviousness is not made over a single compound being substituted for a single compound but [*sic*] rather based on a pattern of common application of these related compounds." *See* Examiner's Answer at pages 5-6. The Examiner then states that one of ordinary skill in the art would be aware of the changes in formulation that would be required without addressing how one could go from one formulation to another. *See* Examiner's Answer at page 9. This argument, however, continues to be based on the false presumption that drugs of the same pharmacologic class possess similar chemical properties and characteristics. The argument is also in direct contrast to Dr. Coop's testimony in his declaration. Although it is a well-established principle of patent law that compounds of similar *structure* are presumed to have similar properties (*See, e.g. In re Dillon,* 919 F.2d 688, 692-693; 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990)), there is no authority for the converse proposition articulated by the Examiner: that compounds with similar *pharmacological activities* necessarily have similar chemical properties. In fact, the Examiner's analysis skips a step required by law, and by the MPEP, in examining claims involving chemical compounds. *See* MPEP 2144.08.II.A.4(d).[2]

Moreover, the Examiner's assertions do not negate the fact that the different formulations taught in the cited patents teach away from their combination. One of ordinary skill in the art could not simply take a solution/suspension and convert it to a transdermal delivery system without the need for undue experimentation. This is particularly true with regard to a drug dissolved in solution (as in the '232 patent) that differs substantially from a delivery system formulation designed to provide a controlled release through membranes. Simply put, each of

[2] MPEP 2144.08 II.A.4.(d) states that the Examiner should "[c]onsider the properties and utilities of the *structurally similar* prior art species or subgenus" (emphasis added). Thus, only after compounds are found to have structural similarity are the properties of those compounds compared.

the chemical properties that impart physical properties affecting formulation has not been accounted for. There is also no suggestion how to account for the properties in the '232 patent, which merely mentions lasofoxifene in claims 1 and 2 and the term "transdermal" in an entirely separate section of the patent.

Since the '232 patent makes no mention of transdermal delivery *systems*, there is no suggestion that its disclosure could even be combined with the teachings of the '925 or '817 patents since each has its own unpredictable characteristics that need to be accounted for. This is a position supported by the testimony of Dr. Coop in his declaration. The '232 patent at most implies that a solution, such as a parenteral solution, may be applied topically to the skin. A solution, however, is far from the transdermal drug delivery system claimed in the instant application.

To this end, the Examiner's broad arguments do not take into account the complexities recited in the Coop declaration and do not demonstrate that a *prima facie* case of obviousness has been established under 35 U.S.C. § 103(a).

Improper Procedure

The Examiner also failed to properly address the Coop declaration on procedural grounds. For example, the Examiner asserted that the declaration submitted under 37 C.F.R. § 1.132 filed on October 27, 2008 was insufficient to overcome the pending rejections of the claims. The basis for this assertion was that the "[t]he affidavit does not address the specific physical features of the transdermal device of the instant claims" and that "the Board... previously determined that these arguments when presented in the previous Appeal Brief were not deemed persuasive." However, such a response, which relies on the Board's assertion of obviousness, does not properly address the evidence set forth in the Coop declaration.

Appellant's responsive filing shifts the burden to the Examiner for rebuttal, which cannot simply be the reassertion of old arguments. *In re Oelrich and Divigard*, 579 F.2d 86, 91; 198 U.S.P.Q. 210, 215 (CCPA 1978) (The submission of affidavits "[s]hifts the burden of going forward with the evidence back to the PTO.").

A proper response requires the Examiner to consider all of the evidence anew rather than evaluating it on its ability to refute the earlier obviousness assertion. *In re Piasecki,* 745 F.2d 1468, 1472; 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). The obviousness assertion must be freshly considered by the Examiner because an "[a]nalytical fixation on an earlier decision can tend to provide that decision with an undeservedly broadened umbrella effect." *Id.* citing *In re Rinehart*, 531 F.2d 1048, 1052, 189 UPSQ 143, 147 (CCPA 1976). This is precisely what the Examiner has done by founding his arguments in the Board's previous decision. The Examiner's reliance on the Board's decision in the previous appeal, however, is contrary to the procedure defined by the court. A proper analysis "will rest upon [an] evaluation of all facts in evidence, uninfluenced by any earlier conclusion reached by an earlier [B]oard upon a different record." *Id.* at 1472-1473.

On these bases, the Examiner has not set forth a proper rebuttal to Appellant's evidence and arguments. The Examiner has merely repeated his assertions of obviousness that are grounded on the Board's previous decision, which not only considered a different set of facts, but also was rendered without regard to the Coop declaration. Further, the Examiner has not set forth any evidence that contradicts the Coop declaration and has fallen back on the position that one drug from a pharmacological class would suggest other drugs of that class no matter how chemically unrelated they are - a position that is not supported by the law nor the MPEP.

Conclusion

The Examiner's assertions fail to establish the proper rebuttal to the evidence presented by Appellant demonstrating non-obviousness. Accordingly, Appellant respectfully requests reconsideration and withdrawal of the claim rejections, and that the application be passed to issuance. Failing that, the Appellant respectfully requests the Board to overrule the Examiner's rejections, based on the explanations presented above and in the Appeal Brief, and to pass this application to issuance.

The Commissioner is hereby authorized to charge the brief fee set forth in 37 C.F.R. § 41.20(b)(2) and any insufficiency or credit any overpayment associated with this application to Bingham McCutchen LLP Deposit Account No. 50-4047.

Respectfully submitted,

BINGHAM McCUTCHEN LLP

Date: October 13, 2009

Matthew L. Fedowitz
Reg. No. 61,386

Bingham McCutchen LLP
2020 K Street, N.W.
Washington, D.C. 20006-1801
Tel.: (202) 373-6000
Fax: (202)-373-6001